

**■ Specification for all models**

**□ Casing**

Manufactured in galvanised sheet steel. Model HQ and HW have an additional two-layer finishing in papyrus white. Ex-models without paint.

**□ Impeller**

Highly efficient, profiled blade impeller, dynamically balanced and manufactured from impact resistant polymers. Suitable for -30 to +60 °C. Deviation for ex-models.

**□ Motor**

Totally enclosed motor with a die-cast aluminium casing, protected to IP 55. Ball bearing mounted. Maintenance-free and interference-free. Humidity protection of windings. For maximum air flow temp. see table below. Deviation for ex-models.

**□ Motor protection**

All models (explosion proof excluded) have thermal contacts as standard which must be connected to a motor protection unit (see below).

**□ Electrical connection**

Terminal box (IP 55) mounted on rear of motor as standard. Also on outside of piping for HRF. Deviation for ex-models.

**□ Guard**

Powder-coated steel wire for HQ and HW (HQ ex-models galvanised) according to DIN EN ISO 13857

**□ Speed control**

For all speed controllable models the current are identified with a value in the "speed controlled" column of the table below which must be used when selecting a controller. Possible allocations of frequency inverters are specified in the table below. The planned

use of a frequency inverter without Sine filter must be stated when ordering. This requires a change of fan design and potential additional costs. The air flow rates are shown in the performance curves.

**□ Reversed operation**

All models are reversible when wired to a reversing switch. For reverse air flow direction allow a loss in performance of approx. 1/3.

**□ Installation**

Installation in any position. Ensure that the motor drainage holes face downwards.

**□ Dimensions**

Pole-switch and explosion proof models may deviate from the information above.

**□ Sound levels**

See characteristic curve. The sound power and sound pressure are specified at 4 m distances under free field conditions, for average operating point suction/pressure side. See page 10 on for sound emission and acoustics. Deviation for ex-models.

Information	Page
Techn. description	140
Selection chart	141
Information for planning	10 on
<b>Made to order designs</b>	
Alternative voltages, protection classes, air flow direction, air flow temperature, acid protection and cast aluminium impellers are available on request.	
Note the technical information on page 15 on.	

R.P.M.	Air flow volume (FID)	Motor power	Current*		Wiring diagram	max. air flow temp. standard supply	speed controlled	Weight net	Model					
			standard-supply	max. controlled					HQ incl. guard	Ref. no.	HW incl. guard	Ref. no.	HRF	Ref. no.
min <sup>-1</sup>	V m <sup>3</sup> /h	W	A	A	No.	+°C	+°C	kg						
<b>1 Phase motor, 230 Volt / 50 Hz, capacitor motor, protection to IP 55</b>														
930	2570	77	0.52	0.54	475 <sup>1)</sup>	60	40	13.0	HQW 400/6	1110	—	—	HRFW 400/6 <sup>1)</sup>	0206
1350	4010	235	1.00	1.10	475 <sup>1)</sup>	60	40	14.0	HQW 400/4	1111	HWW 400/4	1008	HRFW 400/4 <sup>1)</sup>	0207
<b>3 Phase motor, 400 Volt / 50 Hz, squirrel cage motor protection to IP 55</b>														
950	2620	89	0.28	0.30	469	60	40	13.0	HQD 400/6	1123	—	—	—	—
1330	3960	200	0.40	0.40	469	60	40	14.0	HQD 400/4	1124	HWD 400/4	1025	HRFD 400/4	0229
<b>Two-speed, 3 ph., 400 V, 50 Hz, Y/Δ switch, protection to IP 55</b>														
1325/1085	3170/3920	135/205	0.25/0.45	0.45	520	60	40	20.0	HQD 400/4/4	1465	—	—	HRFD 400/4/4	1466
2890/2600	7890/8400	1300/2310*	3.00/5.60*	4.70	520	40	40	25.0	HQD 400/2/2	1475	—	—	HRFD 400/2/2	1474
<b>2 speed motor, pole-switching, Dahlander windings, 400 Volt, 50 Hz, protection to IP 55</b>														
690/1390	2010/4100	70/250	0.25/0.60	—	472	60	—	13.0	HQD 400/8/4	1137	—	—	HRFD 400/8/4	0399
1480/2940	4180/8540	300/2310*	1.00/5.20*	—	472	40	—	24.0	HQD 400/4/2	1139	—	—	HRFD 400/4/2	0401
<b>Explosion proof Ex e II, 3 ph., 400 Volt, 50 Hz, protection to IP 55, temp. class T1-T3</b>														
920	2870	250*	0.97*	—	470	40	—	13.0	HQD 400/6 Ex	1109	—	—	—	—
1370	4380	370*	1.08*	—	470	40	—	16.0	HQD 400/4 Ex	1153	—	—	HRFD 400/4 Ex	0479

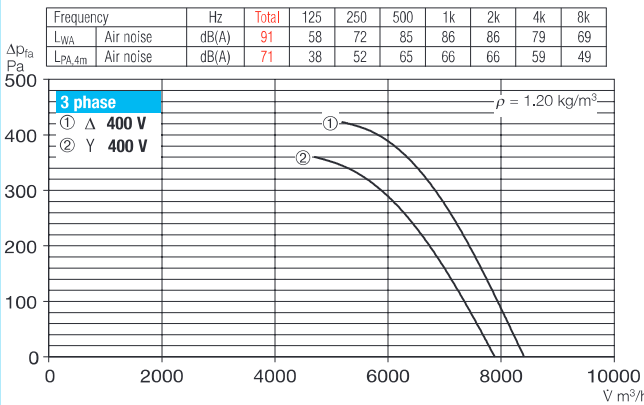
\* Motor nominal values, Ex see info page 16.

<sup>1)</sup> Type HRFW: connect using wiring diagram no. SS-965.

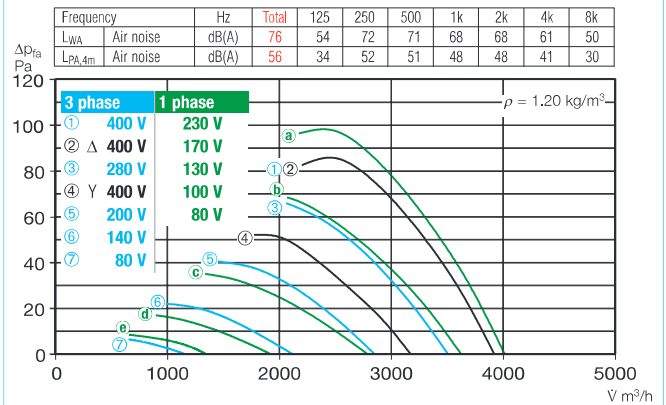
<sup>2)</sup> Incl. full motor protection.

<sup>3)</sup> Incl. pole switch.

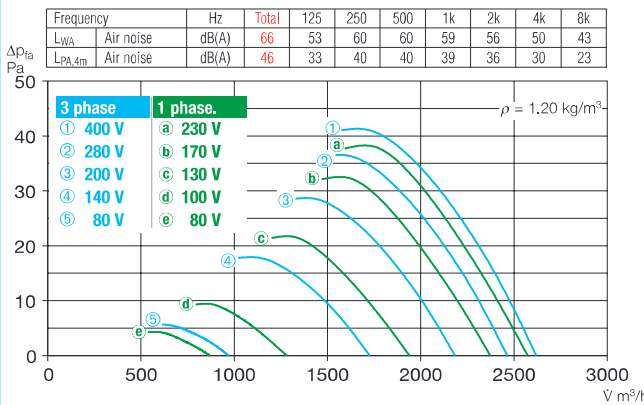
### 400/2



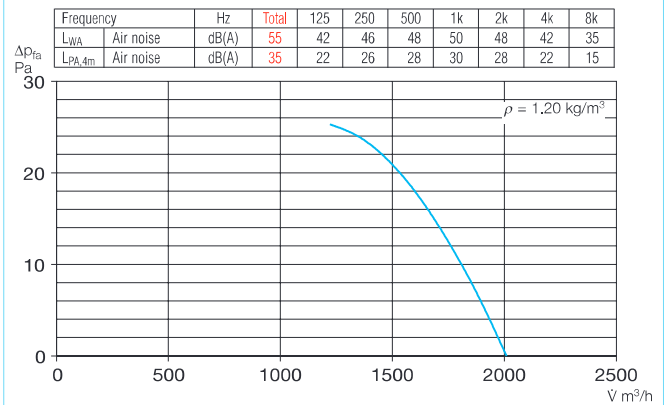
### 400/4



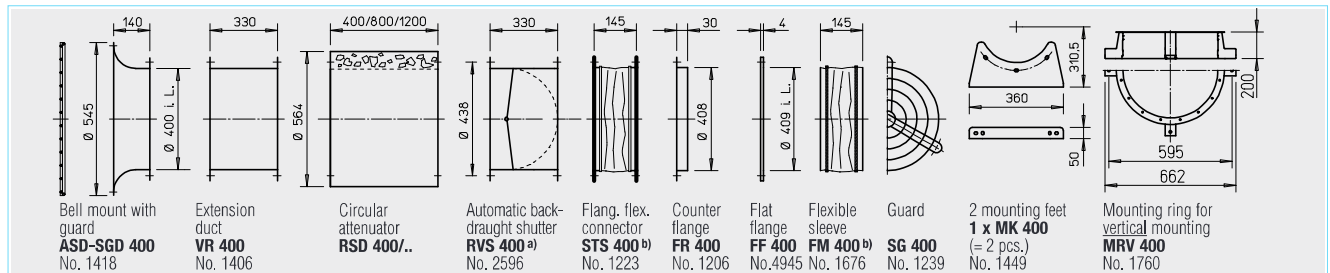
### 400/6



### 400/8



### Accessories for HRF Description see page 230 on



<sup>a)</sup> For motorised shutters see accessory page

<sup>b)</sup> Models for ex-proof fans see below

Frequency inverter with integrated Sine filter		Transformer controller 5-speed Pole switch		Electronic controller, stepless flush/surf.		Full motor protection for connection of integrated thermal contacts		Reversing switch	
Model	Ref. no.	Model	Ref. no.	Model	Ref. no.	Model	Ref. no.	Model	Ref. no.
—	—	MWS 1,5 <sup>2)</sup>	1947	ESU 1/ESA 1	0236/0238	MW	1579	WS	1271
—	—	MWS 1,5 <sup>2)</sup>	1947	ESU 3/ESA 3	0237/0239	MW	1579	WS	1271
FU-BS 2,5 <sup>2)</sup>	5459	RDS 1 <sup>2)</sup>	1314	—	—	MD	5849	WS	1271
FU-BS 2,5 <sup>2)</sup>	5459	RDS 1 <sup>2)</sup>	1314	—	—	MD	5849	WS	1271
Speed switch									
FU-BS 2,5 <sup>2)</sup>	5459	RDS 1 <sup>2)</sup>	1314	—	—	M 4 <sup>4)</sup> /MD	1571/5849	WS	1271
FU-BS 5 <sup>2)</sup>	5460	DS 2	1351	ESD 5 <sup>2)</sup>	0501	M 4 <sup>4)</sup> /MD	1571/5849	WS	1271
Pole switch									
—	—	PDA 12 <sup>4)</sup>	5081	—	—	M 3 <sup>3)</sup>	1293	PWDA	1282
—	—	PDA 12 <sup>4)</sup>	5081	—	—	M 3 <sup>3)</sup>	1293	PWDA	1282
—	—	not permitted	not permitted	not permitted	not permitted	—	—	—	—
—	—	not permitted	not permitted	not permitted	not permitted	—	—	—	—

<sup>4)</sup> see switch product page for flush mounted version.

### Other accessories Page

#### <sup>b)</sup> Accessories for explosion proof fans

**Flanged flexible connector**

Type STS 400 Ex Ref. no. 2505

**Flexible sleeve**

Type FM 400 Ex Ref. no. 1692

#### **Extension tube for HS**

Type VH 400 Ref. no. 1346

Cylindrical duct, galvanised steel, length: 150 mm.

Attenuators 421 on

Shutters and grilles 487 on

Speed controllers

and switches 525 on